able to make them live on a transparent instead of an opaque bottom probably the migration of the eye, so characteristic of the species, would not have taken place.

"Thus when Darwin conceived the theory of natural selection, which is one of the causal explanations of the origin of new species from other pre-existing species, he did nothing after all but affirm as probable, by analogy with the results of artificial selection, that if he had had the means of altering any one of the internal or external conditions of life in an animal species and had been able to ascertain exactly, or even approximately, what were the useful properties and what the characteristics harmful to the species under the new conditions, he would have effected the gradual elimination of the individuals presenting in more marked form the harmful characteristics and a persistence of the individuals where the useful characteristics were more pronounced; and he would have been able to effect the elimination of the intermediate type of the species and the constitution of a new variety or species having in preponderance the more useful characteristics and therefore embodying in a maximum degree those adaptations which had been up to then interpreted as the expression of a finality of nature. The theory of selection thus resolves itself into a complex of experiments—conceptually, if not practically, possible." (P. 52.)

GIOVANNI VAILATI.

WILLIAM THOMSON, LORD KELVIN.

Sir William Thomson, who at the height of his fame was created the first Lord Kelvin, has died recently in his eighty-fourth year. He was one of the greatest mathematicians and physicists of all ages, and his views may be considered as the conservative scientific conception of the present age which just now is being vigorously attacked with more or less success by a fraction of the rising generation. He was born at Belfast, Ireland, June, 1824, and was appointed professor of natural history at the University of Glasgow in 1846. He held that chair until the close of his life. His investigations in the domains of mechanics, electricity, heat, magnetism, belong to the best scientific works of our age. His little textbook, *An Elementary Treatise on Natural Philosophy,* which he elaborated in company with P. G. Tait, has become a classic, and there is no one who has studied the subject but has used it in his

scientific education. Lord Kelvin's discoveries have also been applied to practical life, as is shown for instance in the part he took in laying the first cables across the Atlantic.

HUGO SCHUCHARDT ON ESPERANTO.

(Translation.)

To the Editor of The Monist:

In the October number of *The Monist* you place me "in the ranks of Esperantists." That is not correct. For twenty years I have endeavored to demonstrate that from a philological standpoint, whether the historical or psychological side be emphasized, the possibility of an artificial international language can not be contested; and I have finally expressed myself in the May number of the *Beilage zur Allgemeinen Zeitung,* with regard to and against Brugmann's point of view, and have especially declared again as formerly against the simile of the homunculus. No! "Languages are not living organisms like animals"; they are functions like eating, walking, etc.

I have never entered the lists for any *particular* international auxiliary language, neither for Volapük nor for Esperanto. I consider the formation of such a language as both possible and desirable and maintain the opinion that intercourse among the great nations will some time be so regulated that as far as possible each shall use his native language and each shall understand those of foreign countries.

HUGO SCHUCHARDT.

GRATZ, October 27, 1907.